

WHAT IS CLAIMED IS:

1. A satellite-based signal receiving method comprising the steps of:

receiving a signal sent from a predetermined satellite of a plurality of satellites moving along respective non-geostationary orbits in a predetermined service area; and

switching said satellite used for receiving the signal at a timing determined for each said service area such that said satellite holds a predetermined elevation angle.

2. A satellite-based signal receiving method according to claim 1, wherein the signal can be received for a predetermined time period both from said pre-switching satellite and said post-switching satellite.

3. A satellite-based signal receiving method according to claim 2, wherein said predetermined time period extends from a time at which the elevation angle of said post-switching satellite reaches a predetermined angle to a time at which the elevation angle of said pre-switching satellite reaches said predetermined angle.

4. A satellite-based service providing method for providing users within a predetermined service area with at least one of a communication service and a broadcasting service utilizing a predetermined satellite of a plurality of satellites moving along

respective non-geostationary orbits, said method comprising the step of:

switching said satellite used for providing the service at a timing determined for each said service area such that said satellite holds a predetermined elevation angle.

5. A satellite-based service providing method according to claim 4, wherein the service is provided for a predetermined time period both from said pre-switching satellite and said post-switching satellite.

6. A satellite-based service providing method according to claim 5, wherein said predetermined time period extends from a time at which the elevation angle of said post-switching satellite reaches a predetermined angle to a time at which the elevation angle of said pre-switching satellite reaches said predetermined angle.

7. A satellite control method for transmitting/receiving a signal utilizing a satellite selected from a plurality of satellites moving along respective non-geostationary orbits, said method comprising the step of:

switching said satellite used for receiving a signal by transmitting information on the position of said satellite for use in transmission/reception of the signal after a switching event to a service area through said satellite before the switching event in said service area.

8. A satellite control method according to claim 7, further comprising:

transmitting, together with said position information, a command signal for instructing an earth station which utilizes said satellites to make an antenna compatible with said post-switching satellite.

9. A receiver terminal for receiving a signal from a predetermined satellite of a plurality of satellites moving along respective non-geostationary orbits, wherein:

said receiver terminal is configured to be able to request a switching timing from a first satellite to a second satellite during a predetermined time period when said satellite used for receiving the signal is switched from said first satellite to said second satellite.

10. A receiver terminal according to claim 9, wherein said receiver terminal is configured to be able to request for a use of said first satellite even after said predetermined time has expired.

11. A satellite control apparatus for transmitting/receiving a signal utilizing a satellite selected from a plurality of satellites moving along respective non-geostationary orbits, said apparatus comprising:

a controller, operative when said satellite for transmitting/receiving a signal is switched from a first satellite to a second satellite, for controlling

said satellites such that the signal can be received both from said pre-switching satellite and said post-switching satellite in a service area for a predetermined time period; and

a transmitter for transmitting information for switching said satellite based on a request from a user for the predetermined time period.

12. A satellite control apparatus according to claim 11, further comprising means, responsive to a signal for requesting to use said first satellite after said predetermined time period has expired, for determining whether or not the continuous use can be permitted, and communicating the result of the determination to an appropriate receiver terminal of the user.